

An Overview of the ATMOS Observations and Preliminary Results From the ATLAS-2 Shuttle Mission

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The Atmospheric Trace Molecule Spectroscopy (ATMOS) experiment made its third Space Shuttle flight as part of the ATLAS-2 mission on "Discovery" between April 8th and April 16th, 1993. ATMOS is an Fourier transform spectrometer designed to obtain high resolution infrared solar absorption spectra during orbital sunrise and sunset periods. These spectra are used to infer the concentration profiles of a large number of atmospheric constituents including many of the chlorine-containing source and reservoir gases as well as the oxides of nitrogen. This recent mission was intended to study the composition of the middle atmosphere at high northern latitudes. By the time of this mission, the Arctic polar vortex was still well defined and was centered over Northern Russia. Despite technical difficulties during the mission, ATMOS successfully gathered data through over 100 sunset and sunrise opportunities, including some 60 sunrises located above 60N, inside and outside of the vortex region. An overview of the ATMOS operations will be presented describing the distribution of measurement opportunities together with preliminary results.

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4. A (Atmospheric Sciences)
5. (a) None
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7. 0%
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